

## Contributors to This Issue

ANDREW H. BOBECK, B.S.E.E., 1948; M.S.E.E., 1949, Purdue University; Bell Telephone Laboratories, 1949-. Since completing the Laboratories' Communications Development Training Program in 1952 Mr. Bobeck has been engaged in the design of both communications and pulse transformers and more recently in the design of solid state memory devices. Member I.R.E., Eta Kappa Nu and Tau Beta Pi.

B. C. BELLOWS, JR., B.S., Cornell University, 1936; General Electric Co., 1936-39; Bell Telephone Laboratories, 1939-. From 1939 to 1941 Mr. Bellows was engaged in engineering trial installations of telephone equipment, particularly multi-channel coaxial cable equipment. During World War II he specialized in the mechanical design and engineering of airborne radars. From 1945 to 1957 he was engaged in the design of circuits and equipment for point-to-point microwave radio relay systems for telephone and television transmission. On May 1, 1957 he was named Transmission Measurement Engineer. Member Eta Kappa Nu and Phi Kappa Phi.

CHARLES A. DESOER, Dipl. Ing., University of Liege (Belgium), 1949; Sc.D. Massachusetts Institute of Technology, 1953; Bell Telephone Laboratories, 1953-. Since joining the Laboratories Mr. Desoer has specialized in linear and transistor network development in the Transmission Networks Development Department. Senior Member I.R.E.

R. SHIELS GRAHAM, B.S., University of Pennsylvania, 1937; Bell Telephone Laboratories, 1937-. His work has been with the design of equalizers, electrical wave filters and similar apparatus for use on long-distance coaxial cable circuits, microwave systems and both telephone and television transmission. During World War II, Mr. Graham designed circuits for electronic fire control computers for military use. He also developed methods for computing network and similar problems on a digital relay computer. He presently supervises the video and intermediate frequency network group. He is a senior member of the I.R.E., and a member of Tau Beta Pi, and Pi Mu Epsilon.

GERALD KRONACHER, Dipl. Eng., Federal Institute of Technology, Zurich, Switzerland, 1937; Assistant Professor, Federal Institute of Technology, 1938; mining engineer, Bolivia, 1939-1946; General Electric Company, 1946-1948; Air Associates, Inc., 1948-1951; Arma Corporation, 1951-1953; Bell Telephone Laboratories, 1953-. Since joining the Laboratories Mr. Kronacher has been associated with the Military Systems Engineering Department studying input and output problems for digital computers. He is the author of many published technical articles.

PIERRE MERTZ, A. B., 1918; Ph.D., 1926, Cornell University; American Telephone and Telegraph Company, 1919-1921, 1926-1934; Bell Telephone Laboratories, 1935-. Mr. Mertz's work with the Bell System has been concerned primarily with transmission problems relating to telephotography and television. Since 1950 Mr. Mertz has acted as a consultant in the Systems Engineering Department on such projects as micro-image readers and commercial and military data transmission problems. Fellow of the I.R.E. and the Society of Motion Picture and Television Engineers; member, American Physical Society, Optical Society of America and the Inter-Society Color Council.

DOREN MITCHELL, B.S., Princeton University, 1925; American Telephone and Telegraph Company, 1925-1934; Bell Telephone Laboratories, 1934-. Mr. Mitchell's early work with the Bell System was concerned with field studies of transmission on long telephone circuits and radio circuits, including supervision of the initial operation of the New York to Buenos Aires radio-telephone circuit. Until 1942 Mr. Mitchell worked on voice operated devices of various kinds including companders, echo suppressors and automatic switching devices. During World War II he participated in military projects involving transmission systems and problems of laying wire from airplanes. Since the war Mr. Mitchell has been primarily concerned with radio systems. In 1955 he was appointed a Special Systems Engineer supervising a data transmission system for the SAGE project, and planning other special services involving radio. Mr. Mitchell has been granted over seventy patents. Member I.R.E.

R. C. PRIM, B.S. in E.E., University of Texas, 1941; A.M., Ph.D., Princeton University, 1949; General Electric Company, 1941-1944; Naval Ordnance Laboratory, 1944-1948; Bell Telephone Laboratories, 1949-. Since joining the Laboratories Mr. Prim has been a member of the Mathematical Research Department engaged in research and con-

sultation in the fields of theoretical mechanics, solid state electronics, aerial warfare and activities analysis. In 1955 he was placed in charge of a sub-department concerned with Computing and Theoretical Mechanics, and is presently in charge of the Communications Fundamentals sub-department. Member American Mathematical Society, American Physical Society, Tau Beta Pi and Sigma Xi.

WERNER ULRICH, B.S., 1952; M.S., 1953; Eng. Sc.D., 1957, Columbia School of Engineering; Bell Telephone Laboratories, 1953-. Mr. Ulrich's first assignment was on the design of an input circuit for an electronic memory and control device. Subsequently he was engaged in the design of logical circuits for electronic controls. Since 1954, he has been working on automatic testing and maintenance facilities for electronic switching systems. Mr. Ulrich is a member of the I.R.E. and Tau Beta Pi.

